

Claims

1. A film holding apparatus for the holding of an intermittently transported motion picture film (71) comprising:

- a film track (33) for guiding the motion picture film; and
- a registration device (61, 61') which is movable from a release position into an engagement position in which the registration device engages into the transport plane of the motion picture film (71) in order to fix a motion picture film guided in the film track in an exact position,

characterized in that

at least one alternative position can be selected as an alternative to a reference position for the engagement of the registration device (61, 61') into the film transport plane.

2. A film holding apparatus in accordance with claim 1, characterized in that the film holding apparatus has an additional registration device (61') which engages, in its engagement position, into the film transport plane of the motion picture film (71 at the alternative position), with one of the two registration devices (61, 61') being able to be selected for the fixing of the motion picture film.

3. A film holding apparatus in accordance with claim 2, characterized in that an electrical drive device (85, 87; 85', 87') is provided for the moving of the registration devices (61, 61') from the release position into the engagement position, with the drive device being able to be controlled such that one of the two registration devices is alternatively brought into the engagement position.

4. A film holding apparatus in accordance with claim 1, characterized in that the registration device (99) is formed to be displaceable between the reference position and the alternative position at the film holding apparatus (101), with a fixing device (103) preferably being provided by which the registration device can be fixed in a precise position alternatively in the reference position or in the alternative position.
5. A film holding apparatus in accordance with claim 1, characterized in that the registration device is arranged at the film holding apparatus such that the registration device engages into the film transport plane with respect to a first transport direction of the motion picture film at the reference position and into the film transport plane with respect to a second, opposite transport direction of the motion picture film at the alternative position; and in that the film holding apparatus is formed symmetrically with respect to a swapping of the transport directions.
10. A film holding apparatus in accordance with any one of the preceding claims, characterized in that the film holding apparatus has a pressure frame (37) which is movable between a release position and a pressure position, with the pressure frame releasing, in the release position, a motion picture film (71) guided in the film track for a transport movement, and with the pressure frame, together with a counter-pressure frame (23), bounding a holding slot (95) in which the motion picture film (71) located in the film track is captured substantially free of clearance in the pressure position.
15. A film holding apparatus in accordance with claim 6, characterized in that the height of the holding slot (95) in the pressure position of
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the pressure frame (37) is set or can be set to a value which corresponds to the sum of the thickness of a motion picture film (71) and to a safety spacing of approximately 20 µm.

- 5 8. A film holding apparatus in accordance with one of the claims 6 or 7, characterized in that the film holding apparatus has an adjustment device (93) by which the height of the holding slot (95) can be varied in the pressure position of the pressure frame.
- 10 9. A film holding apparatus in accordance with one of claims 6 to 8, characterized in that, in the release position, the pressure frame (37), together with the counter-pressure frame (23), bounds a release slot (83), whose height preferably amounts to at least 500 µm.
- 15 10. A film holding apparatus in accordance with one of claims 6 to 9, characterized in that the pressure frame (37) has two projecting transverse webs (51) which extend perpendicular to the transport direction (T) of the motion picture film at that side which faces the transport plane of the motion picture film (71).
- 20 11. A film holding apparatus in accordance with any one of the preceding claims, characterized in that a moving coil drive (85, 87; 85', 87') is provided to move the registration device (61, 61') between the release position and the engagement position.
- 25 12. A film holding apparatus in accordance with any one of the preceding claims, characterized in that the film holding apparatus is connected to a regulation circuit by which the engagement depth of the registration device can be regulated relative to the film track, with

the regulation circuit taking account of the actual engagement depth and the actual engagement force of the registration device.

13. A system of at least one first film holding apparatus (97) and one
5 second film holding apparatus (97') for holding a motion picture film (71), with the first and the second film holding apparatus each having

- a film track (33) for guiding the motion picture film; and
- a registration device (61, 61') which is movable from a release position into an engagement position in which the registration device engages into the transport plane of the motion picture film in order to fix a motion picture film guided in the film track in an exact position,

characterized in that

15 the registration device (61) of the first film holding apparatus (97) engages, in its engagement position, into the transport plane of the motion picture film (71) at a reference position and the registration device (61') of the second film holding apparatus (97') engages, in its engagement position, into the transport plane of the motion picture film (71) at an alternative position.

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25 14. A film scanning apparatus for the scanning of an exposed motion picture film (71) comprising

- at least one film holding apparatus (113) for holding the motion picture film;
- a film drive device (123, 125) for the intermittent transporting of the motion picture film;
- a light source (111) for the transmission of transmitted light in the direction of the film holding apparatus; and

- an optoelectronic light receiver (119) for the reception of the light transmitted by the film holding apparatus and for the production of corresponding signal values,

wherein the film holding apparatus has a film track (33) for the guiding of the motion picture film and a registration device (61, 61') which is movable from a release position into an engagement position in which the registration device engages into the transport plane of the motion picture film (71) in order to fix a motion picture film guided in the film track in an exact position; and

10 wherein the film holding apparatus (113) is in particular formed in accordance with any one of the preceding claims,
characterized in that

at least one alternative position can be selected alternatively to a reference position for the engagement of the registration device (61, 15 61') into the film transport plane.

15. A film scanning apparatus in accordance with claim 14, characterized in that the film scanning apparatus has a control and evaluation circuit (121) by which the position of the engagement of the registration device (61, 61') into the film transport plane can be selected automatically.

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30 16. A film scanning apparatus in accordance with claim 15, characterized in that the control and evaluation circuit (121) has an image detection circuit by which a degree of change can be determined which corresponds to the extent of a change of the image information of two film images (73) scanned sequentially; and in that the control and evaluation circuit initiates a double scan of a film image with the registration device (61, 61') in the reference position and in the alternative position when the degree of change de-

terminated with respect to this film image exceeds a pre-determined change threshold value.